ORIGINAL FILE

COHEN, DIPPELL AND EVERIST, P. C.
CONSULTING ENGINEERS
RADIO-TELEVISION
1300 L STREET, N. W.
SUITE 1100
WASHINGTON, D. C. 20005

TELEPHONE
(202) 898-0111
TELECOPIER
(202) 898-0895

JULIUS COHEN
RALPH E. DIPPELL, JR.
DONALD G. EVERIST
MODHIR K. KHANNA
WARREN M. POWIS
JOHN R. URAM, JR.
ROBERT W. GUILL
WILSON A. LA FOLLETTE

December 16, 1992

RECEIVED
DEC 16 1992
FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
Room 222
1919 M Street, N.W.
Washington, D.C. 20554

Re: Reply Comments on Second Report and Order/Further Notice of Proposed Rule Making
MM Docket No. 87-268

Dear Ms. Searcy:

Enclosed herewith are five copies (original and four) of the reply comments by this firm, "In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Service, Second Further Notice of Proposed Rule Making (Docket 87-268)".

If there are any questions, please do not hesitate to contact this office.

Sincerely,

COHEN, DIPPELL AND EVERIST, P.C.

Donald G. Everist
Secretary-Treasurer

DGE:mcw
Enclosure

No. of Copies rec'd 0+4
List A B C D E

COHEN, DIPPELL AND EVERIST, P. C.

Before The
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service	)	MM Docket No. 87-268

COHEN, DIPPELL AND EVERIST, P.C.
REPLY COMMENTS
SECOND FURTHER NOTICE OF PROPOSED RULE MAKING

Introduction

The following reply comments are hereby submitted by Cohen, Dippell and Everist, P.C., Consulting Engineers ("CDE") on the *Second Further Notice of Proposed Rule Making ("Notice")* adopted July 16, 1992 (released August 14, 1992). CDE and its predecessors have practiced before the Federal Communications Commission ("FCC") for more than fifty (50) years, representing the broadcast industry on professional engineering matters. This office has reviewed numerous comments filed in this proceeding and wishes to respond to matters raised in those comments.

Full UHF-ATV Service Must Complement Existing VHF-NTSC Service

Based upon the present FCC Rules, current NTSC predicted Grade B service on VHF channels extends out to approximately 80 miles (130 km) in Zones II and III and to approximately 65 miles (105 km) in Zone I. Current NTSC predicted Grade B service on UHF channels (Zones I, II, and III) extends approximately 65 miles (105 km). CDE supports the

pleading by GHTV, SCI, and Busse which observes the loss of service that would result if all television stations are packed into the UHF band. They note on Pages 6 and 7 that,

> "This loss will be particularly acute in rural areas that will not be served by ATV stations in the UHF band, but are now served by NTSC stations now operating in the VHF band. These areas are not presently served by cable systems and even if DBS were to become a reality, it would not be a substitute for the local service that only local broadcasters can provide. The proposal to pack all stations into the UHF band is a solution in search of a problem. The end result will be a problem for which there can be no solution."

The unique advantages of VHF propagation in mountainous areas were further addressed by Spokane Television, Inc. (KXLY-TV Ch.4) in the following comments,

> "The natural terrain within much of this region is mountainous and difficult to serve in large contiguous sections. VHF transmission has enabled us to bring television to thousands of viewers that would not otherwise be able to receive free television. Without regard to whichever system may win the ATV race, KXLY television could not continue to serve our vastly rural communities, many of them in valleys nestled among large groves of evergreen trees, at UHF frequencies, and the proposed 55 mile contours. We do not wish to move into a higher plane of technology at the expense of thousands of rural viewers who would cease to be able to receive free local television news, sports, weather, and emergency broadcast information from Spokane."

We think this item is very pertinent since much of the United States exceeds a terrain roughness factor (delta-h) of 50 meters.

Joint-broadcaster comments by One Hundred Five Broadcast Organizations reported on an allotment/assignment model which would improve interference-free coverage compared to the

sample table contained in the Commission's notice.[1/] Indeed, wide-area advanced television coverage generally free of co-channel and adjacent-channel interference may be vital to the continued viability of off-the-air free television service to the American public. We believe the Commission should not only retain the current VHF usage for ATV operation but strive for interference-free service within the Grade B contours. The virtual success of this unique service may rest on the foundation of the 80 mile Zone II and III VHF, the 65 mile Zone I VHF protected interference-free contours. One way of achieving service which will be interference-free from adjacent channel operations is bunching the VHF-TV channels together in one area.

Assuming that the selected ATV system can operate on "bunched" channel groups,[2/] the 80 mile protected contour of bunched 7-13 channel groups could overlap an adjacent market removed by 60 miles or more without the destructive first-adjacent channel interference problems. Similarly, UHF spectrum can be divided into bunched channel groups with a guard band (or LPTV) channel between each group bunch. The sample ATV table proposed by the FCC in its Notice contained many UHF bunched groups, such as Channels 34, 35, and 36 in Washington, DC. Obviously, this approach needs further scrutiny once all ATV testing has been completed and documented.

[1/]We are still awaiting the results of the allotment/assignment model.

[2/]For example, VHF channels 7, 8, 9, 10, 11, 12, and 13 could be used to simultaneously serve a given large metropolitan area, rather than the current channel sequence of 2, 4, 5, 7, 9, 11, and 13. An adjacent market which currently uses the remaining channels such as 3, 6, 8, 10, and 12 would be re-assigned channels 2, 3, 4, 5, and 6.

The desirability of the VHF spectrum for wide area coverage vis-a-vis UHF spectrum was also echoed by land mobile interests in seeking to usurp the VHF-TV broadcast spectrum for its own use.[3/] FCCA stated,

> "These VHF frequencies would be particularly valuable for wide-area land mobile radio use by state police, highway maintenance, and forestry-conservation agencies. Unlike the 800 MHz band, VHF frequencies are unlikely to be affected by heavy foliage and do not require nearly as many repeaters to cover large expanses of land. The 800 MHz band also creates problems for crews fighting forest fires as 800 MHz signals can be disrupted by heavy smoke."

These are the very arguments for maintaining VHF frequencies for ATV use. To do otherwise may jeopardize the future of free off-the-air television to millions of economically disadvantaged U.S. viewers. Land mobile proceedings aimed at more efficient use of the existing land mobile spectrum through "refarming" its own frequencies below 470 MHz is imperative.

Conclusion

The Commission is to be commended on the difficult task in administering the implementation of an advanced television system. We believe the FCC would not be serving the public interest if it failed to use the VHF-TV spectrum for ATV transmission. The lack of VHF-ATV spectrum could deprive tens of millions of U.S. viewers of satisfactory free off-the-air television reception. We also urge the Commission to adopt rules and policies to

---

[3/]See, for example, comments of the Forestry-Conservation Communications Association ("FCCA").

rectify the current VHF usage deficiencies so as to provide for wide area interference-free service for ATV operations.

Donald G. Everist

Warren M. Powis

S. K. Khanna